FIG. 1

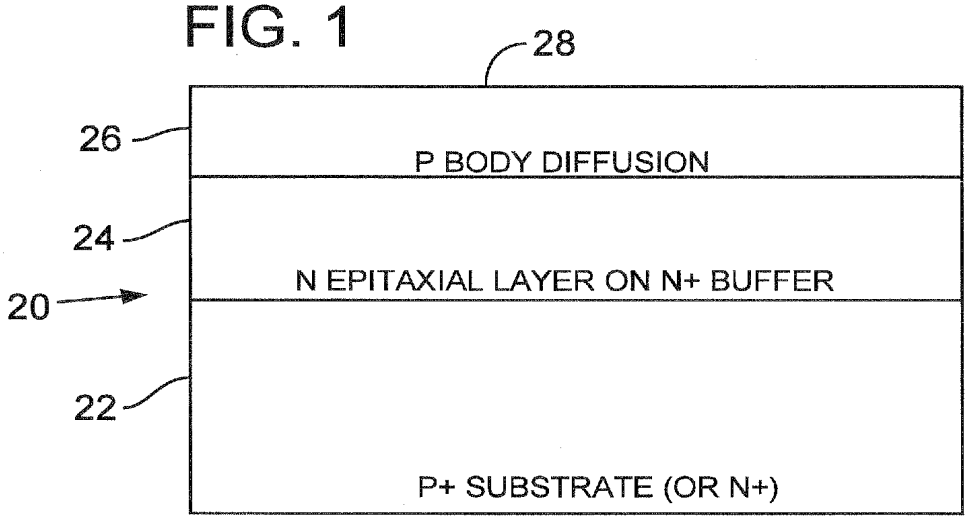

28
26
P BODY DIFFUSION
24
N EPITAXIAL LAYER ON N+ BUFFER
20
22
P+ SUBSTRATE (OR N+)

FIG. 2

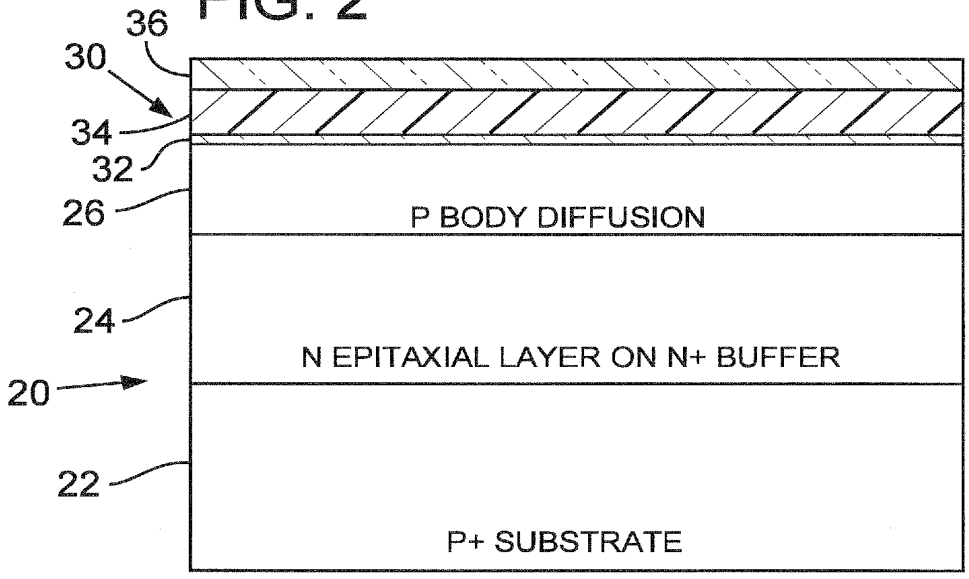

36
30
34
32
26
P BODY DIFFUSION
24
N EPITAXIAL LAYER ON N+ BUFFER
20
22
P+ SUBSTRATE

FIG. 3

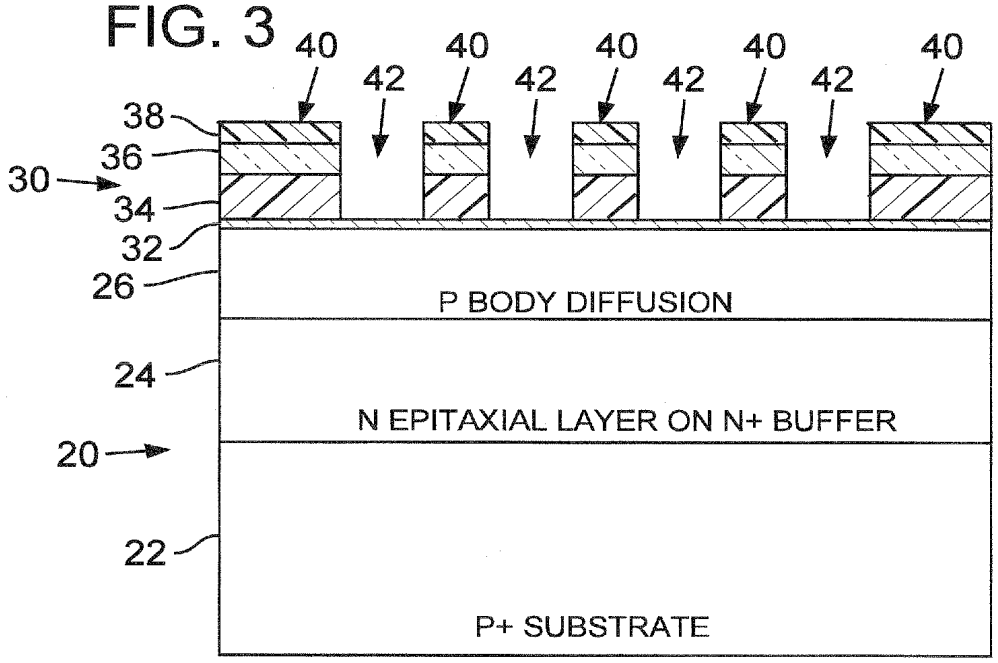

40
42
38
36
30
34
32
26
P BODY DIFFUSION
24
N EPITAXIAL LAYER ON N+ BUFFER
20
22
P+ SUBSTRATE

FIG. 4

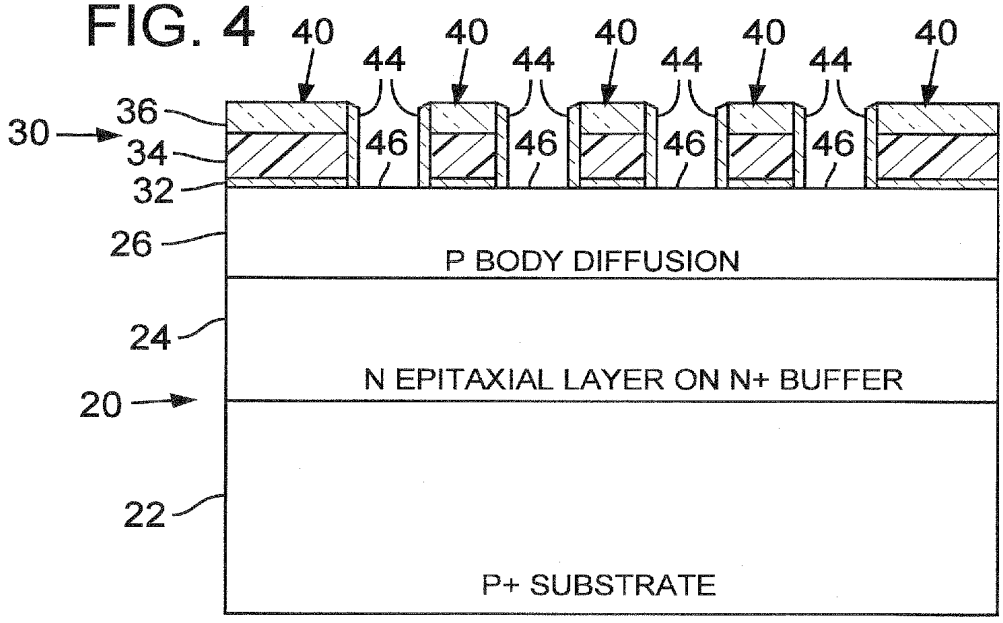

40
44
46
36
30
34
32
26
P BODY DIFFUSION
24
N EPITAXIAL LAYER ON N+ BUFFER
20
22
P+ SUBSTRATE

FIG. 5

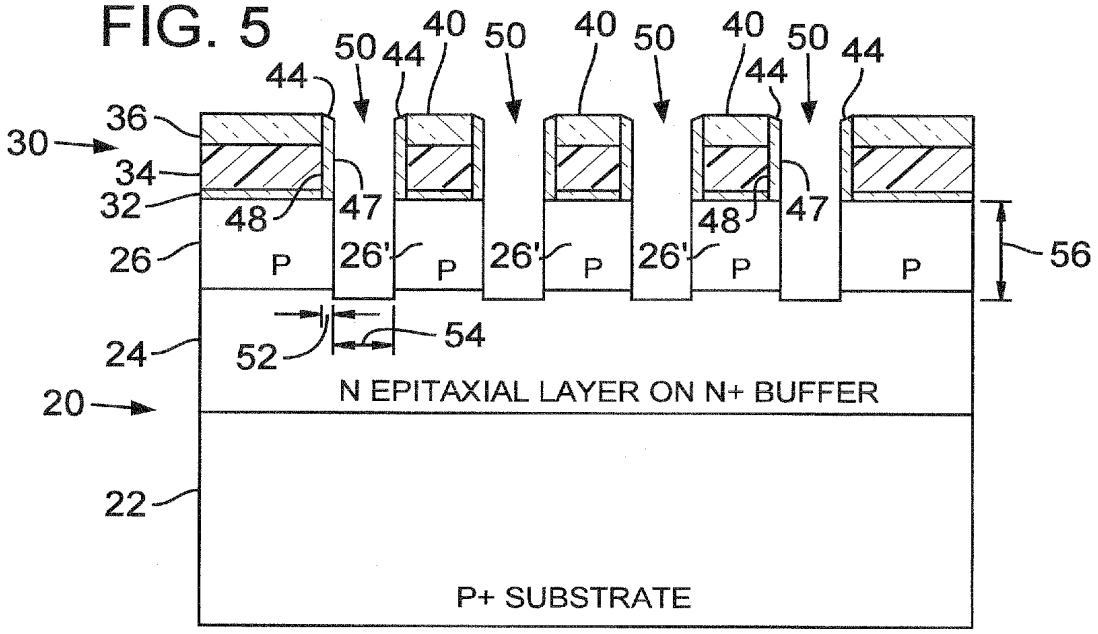

50
44
40
50
40
50
40
50
44
44
36
30
34
32
48
47
48
47
26
P
26'
P
26'
P
26'
P
P
56
52
54
24
N EPITAXIAL LAYER ON N+ BUFFER
20
22
P+ SUBSTRATE

FIG. 6

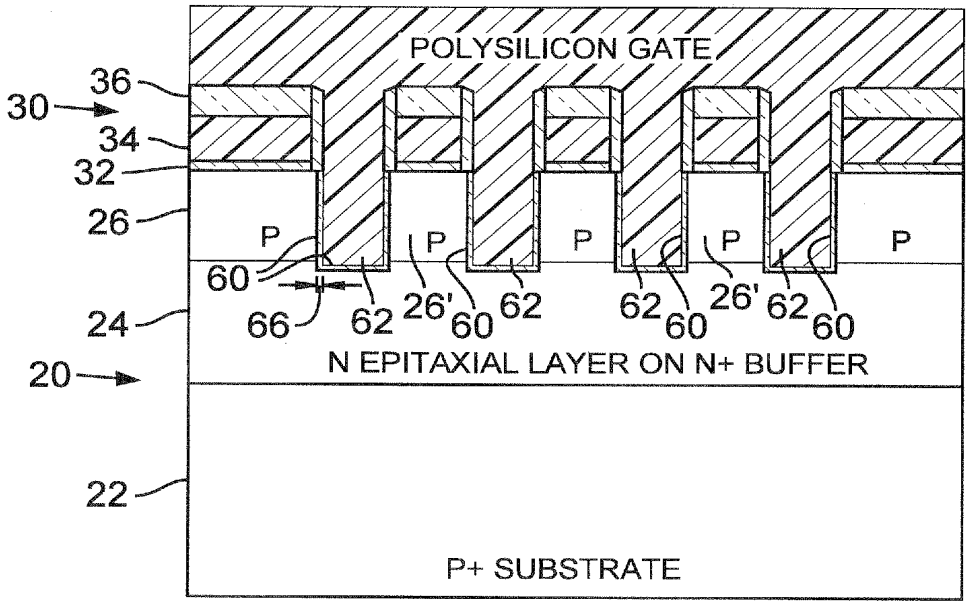

POLYSILICON GATE
36
30
34
32
26
P
P
P
P
P
60
66
62
26'
60
62
62
60
26'
62
60
24
N EPITAXIAL LAYER ON N+ BUFFER
20
22
P+ SUBSTRATE

FIG. 6B

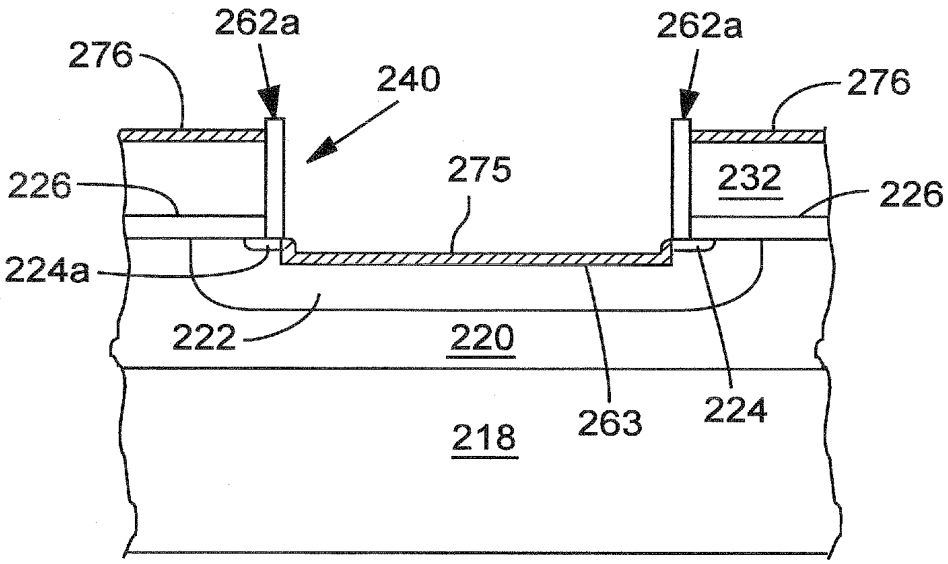

262a
262a
276
240
276
275
226
232
226
224a
222
220
218
263
224

FIG. 6C

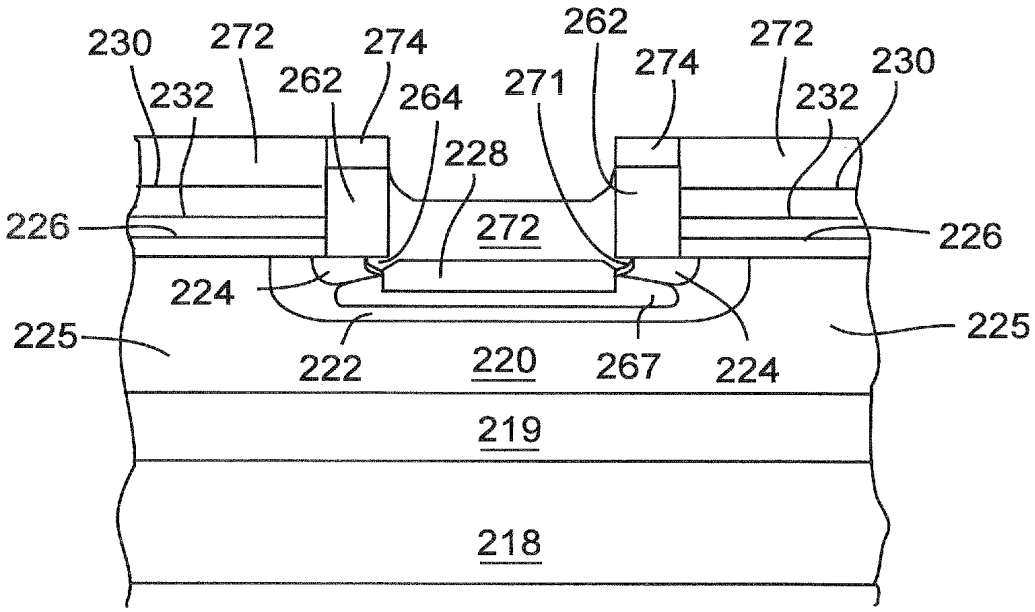

230
272
274
262
264
271
262
274
272
230
232
232
228
226
272
226
224
225
225
222
220
267
224
219
218

FIG. 7

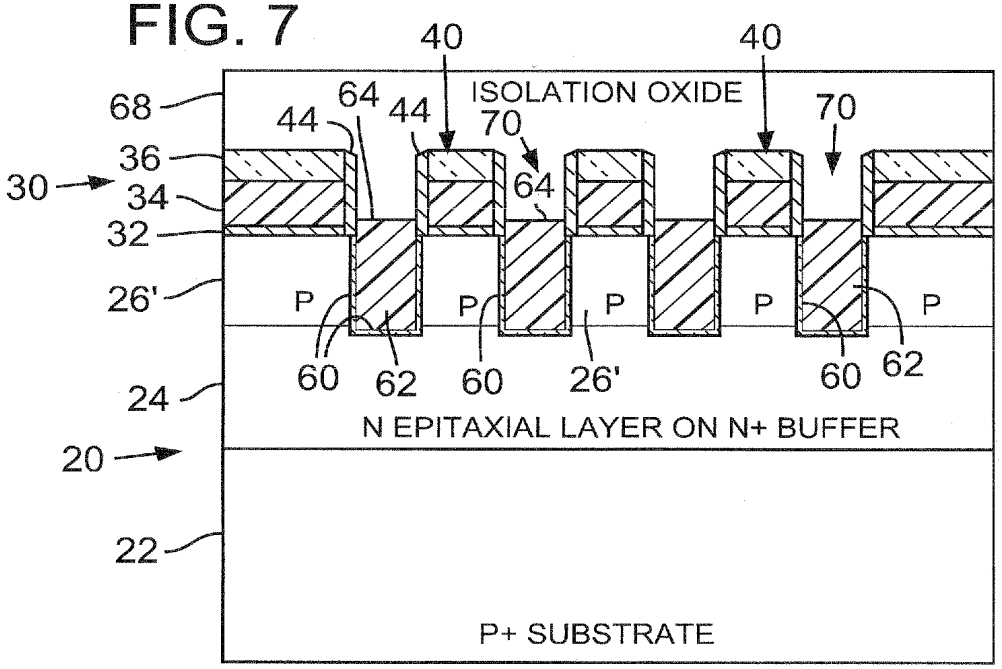

40
40
68
64
44
44
ISOLATION OXIDE
70
70
36
30
34
64
32
26'
P
P
P
P
P
60
62
60
26'
60
62
24
N EPITAXIAL LAYER ON N+ BUFFER
20
22
P+ SUBSTRATE

FIG. 8

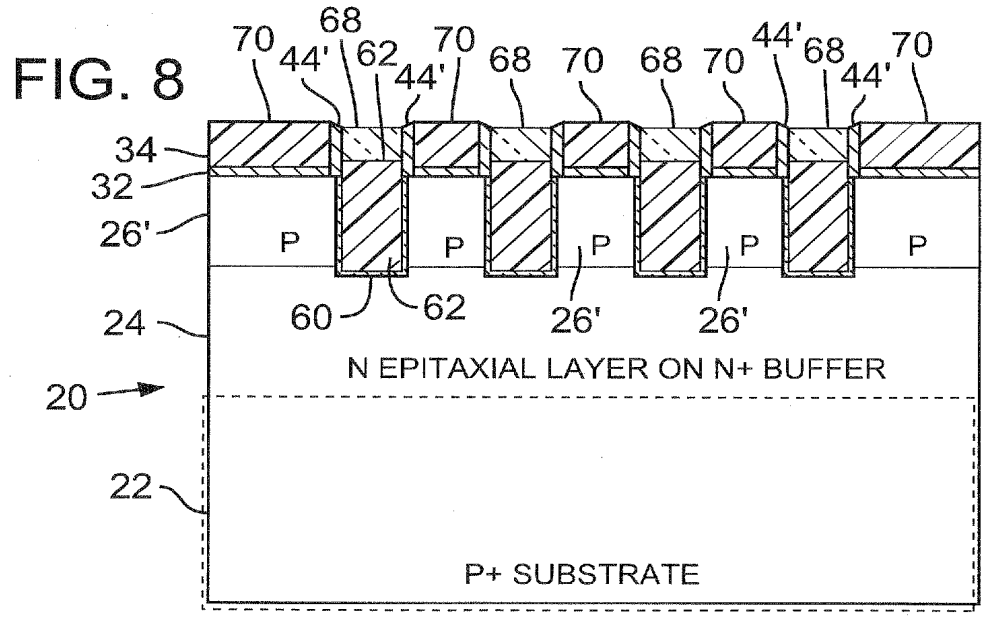

68
70
44'
62
70
68
70
68
70
44'
68
70
44'
34
32
26'
P
P
P
P
P
60
62
26'
26'
24
N EPITAXIAL LAYER ON N+ BUFFER
20
22
P+ SUBSTRATE

FIG. 9

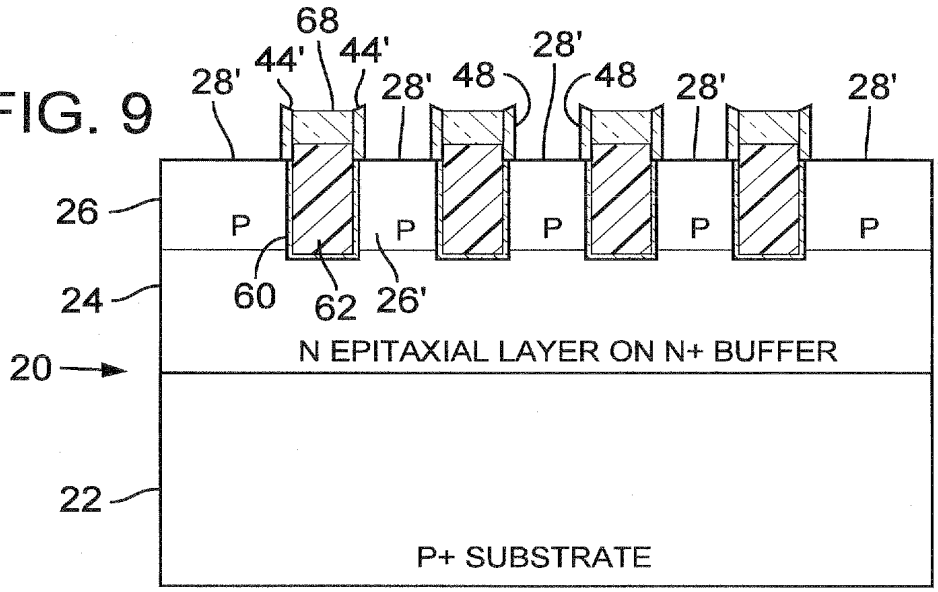

68
44'
44'
28'
28'
48
28'
48
28'
28'
26
P
P
P
P
P
60
62
26'
24
N EPITAXIAL LAYER ON N+ BUFFER
20
22
P+ SUBSTRATE

FIG. 10

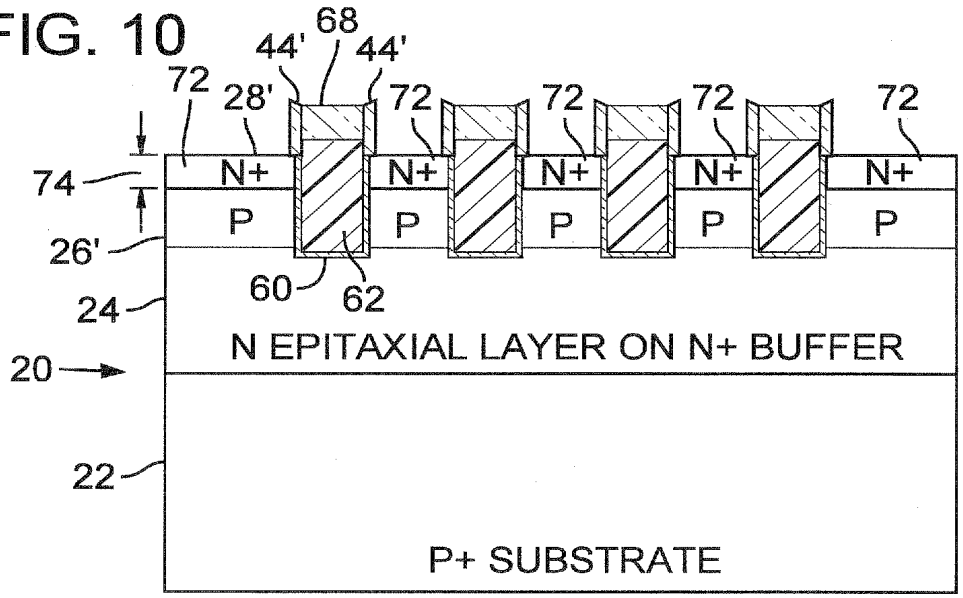

68
44'
44'
72
28'
72
72
72
72
74
N+
N+
N+
N+
N+
P
P
P
P
P
26'
60
62
24
N EPITAXIAL LAYER ON N+ BUFFER
20
22
P+ SUBSTRATE

FIG. 11

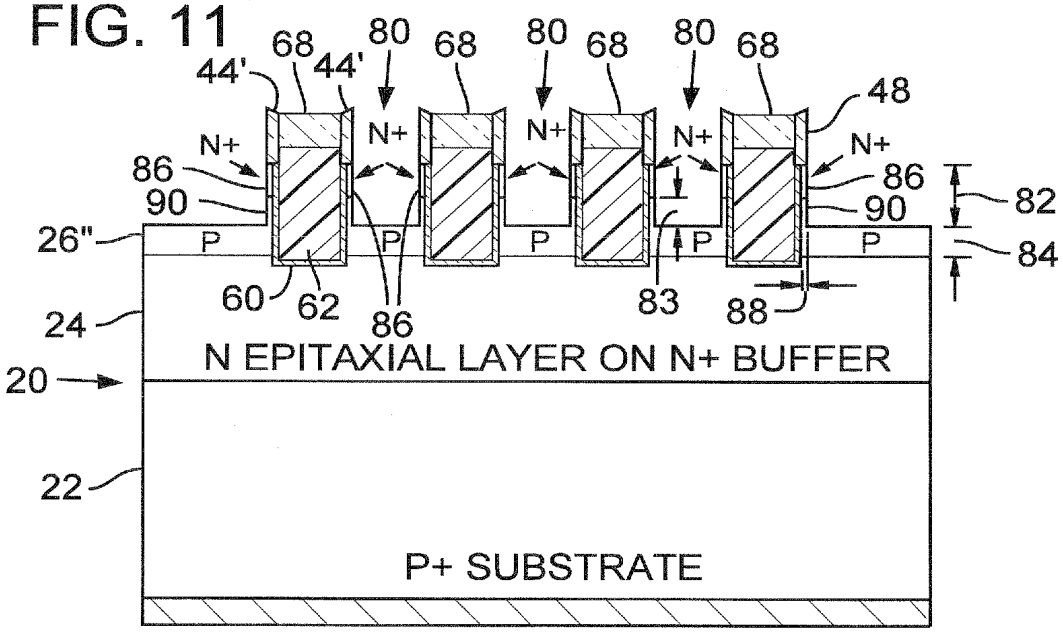
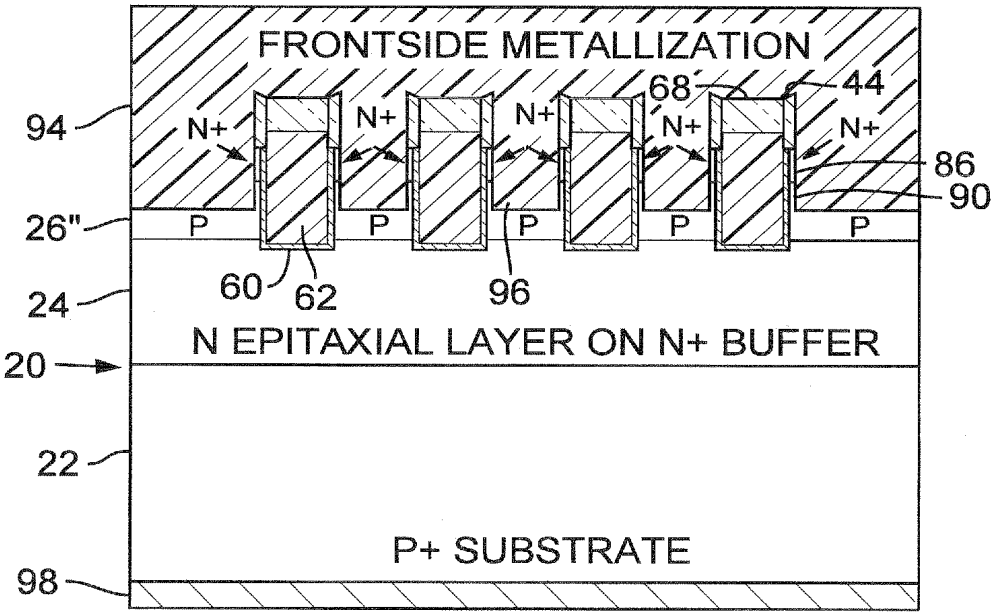

68
80
44'
44'
48
N+
86
90
82
84
26"
P
60
62
86
83
88
24
N EPITAXIAL LAYER ON N+ BUFFER
20
22
P+ SUBSTRATE

FIG. 12


FRONTSIDE METALLIZATION
94
68
44
N+
86
90
26"
P
60
62
96
24
N EPITAXIAL LAYER ON N+ BUFFER
20
22
P+ SUBSTRATE
98

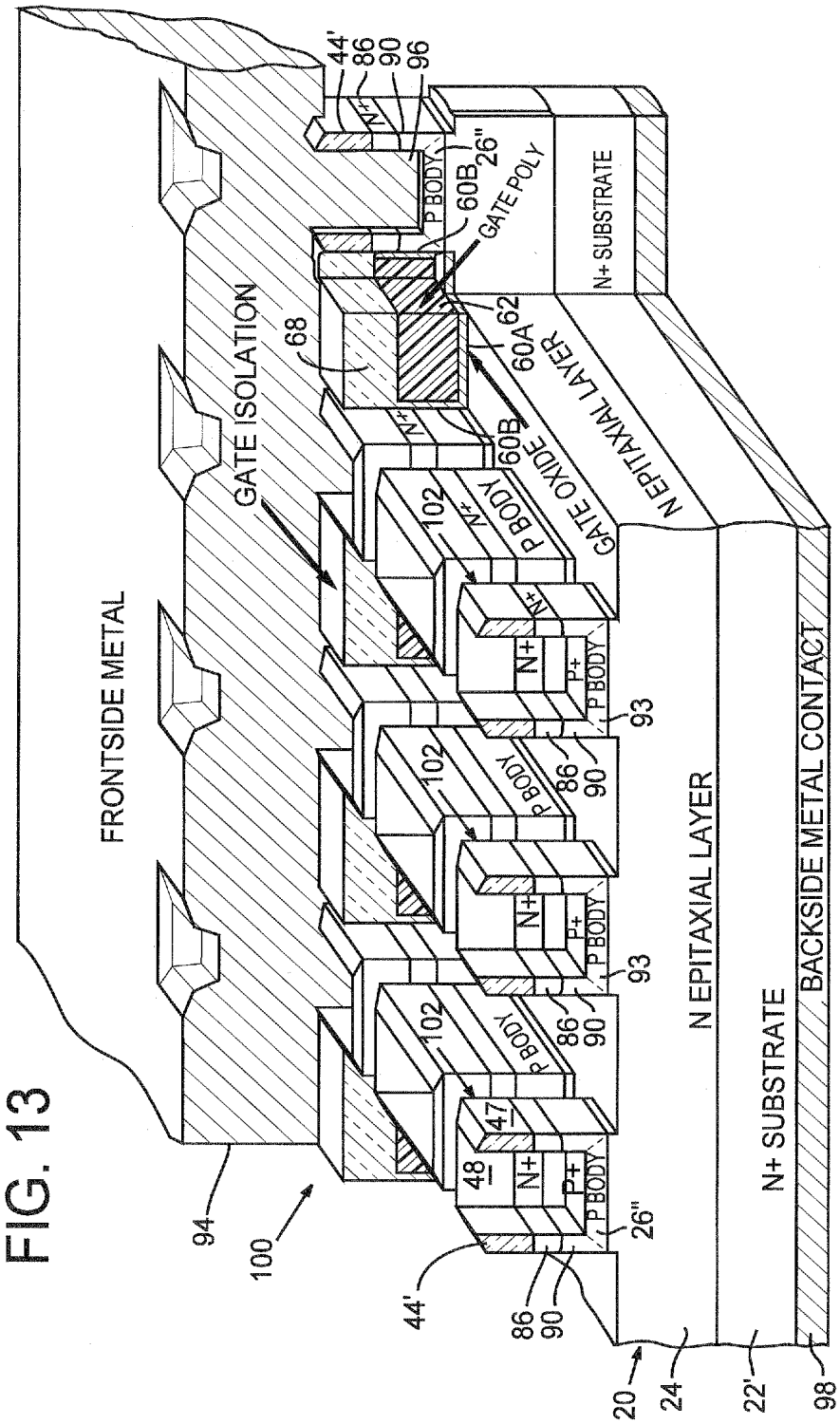

FRONTSIDE METAL
GATE ISOLATION
68
44'
86
90
96
N+
P BODY
60B
26"
GATE POLY
N+ SUBSTRATE
62
60A
N EPITAXIAL LAYER
GATE OXIDE
102
P BODY
N+
P+
93
N EPITAXIAL LAYER
N+ SUBSTRATE
BACKSIDE METAL CONTACT
47
48
94
100
20
24
22'
98

FIG. 13

FIG. 14

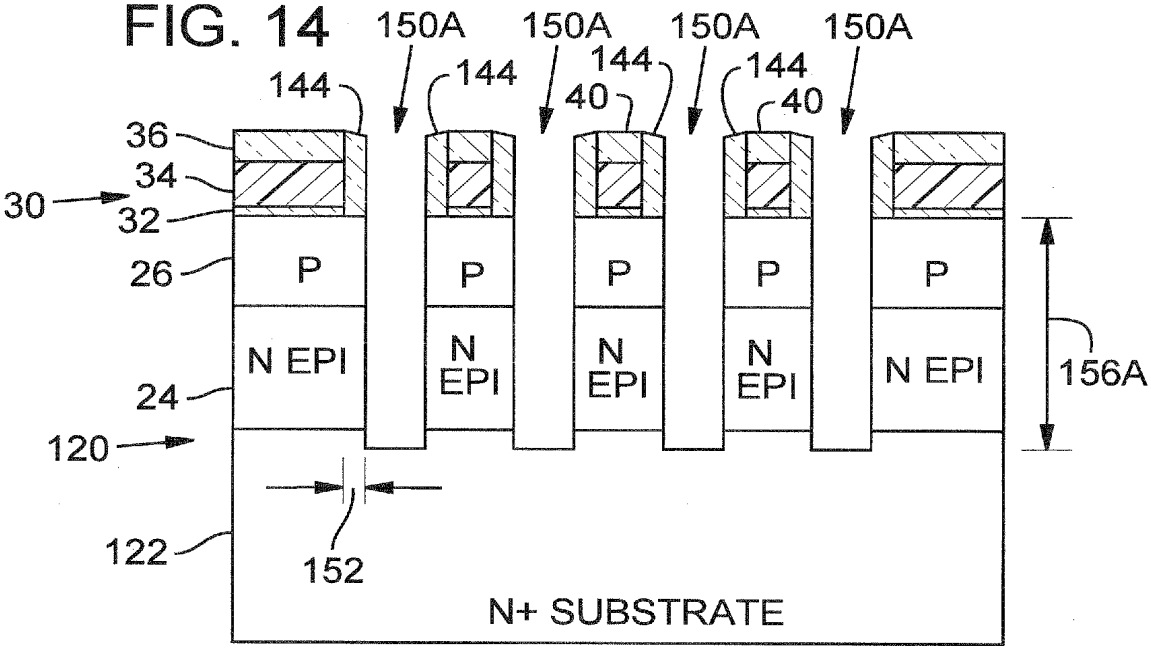

150A
150A
150A
150A
144
144
144
144
40
40
36
34
30
32
26
P
P
P
P
P
N EPI
N EPI
N EPI
N EPI
N EPI
24
120
156A
122
152
N+ SUBSTRATE

FIG. 15

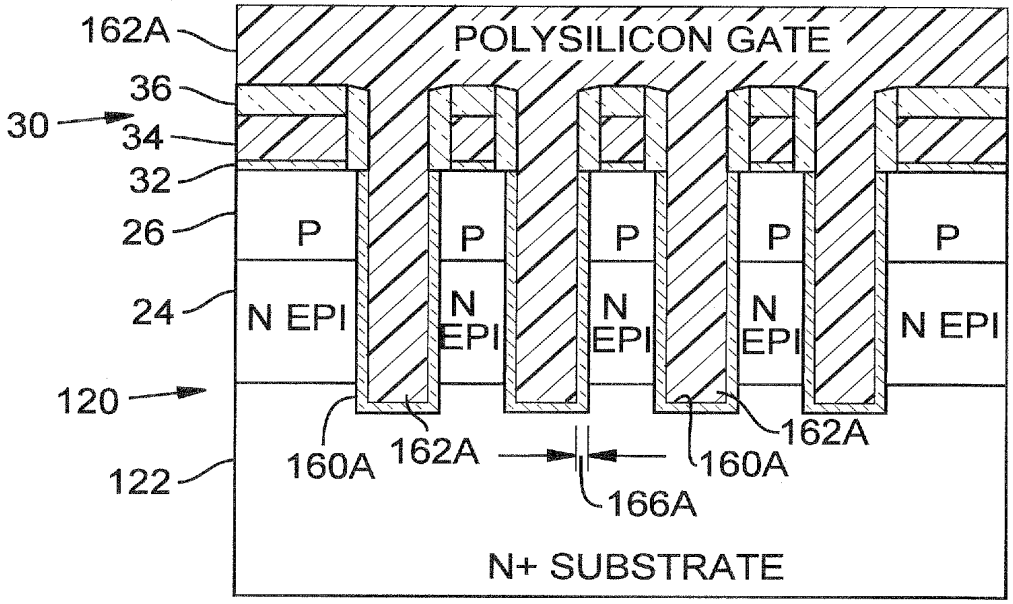

162A
POLYSILICON GATE
36
30
34
32
26
P
P
P
P
P
24
N EPI
N EPI
N EPI
N EPI
N EPI
120
160A
162A
162A
160A
122
166A
N+ SUBSTRATE

FIG. 16

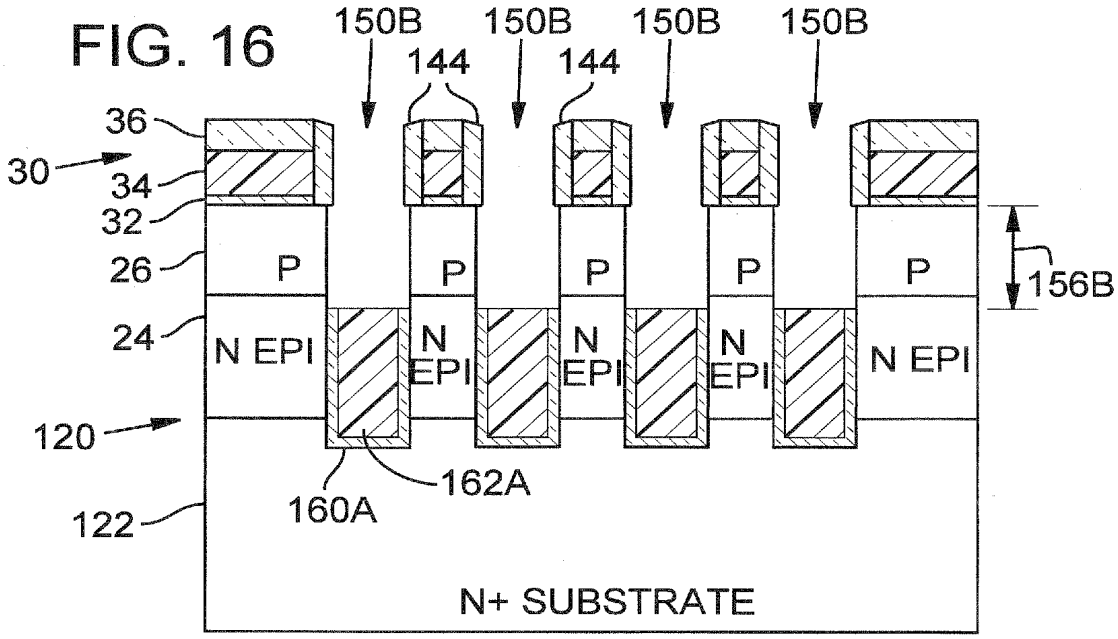

150B
144
150B
144
150B
150B
36
30
34
32
26
P
24
N EPI
120
122
160A
162A
N+ SUBSTRATE
156B

FIG. 17

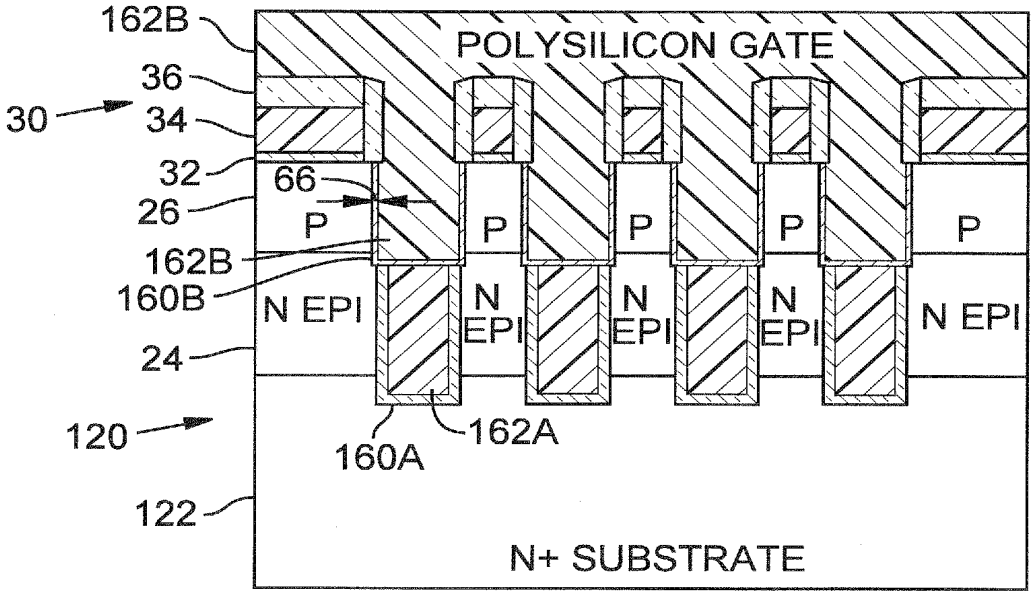

162B
POLYSILICON GATE
36
30
34
32
66
26
P
162B
160B
N EPI
24
120
122
160A
162A
N+ SUBSTRATE

FIG. 18

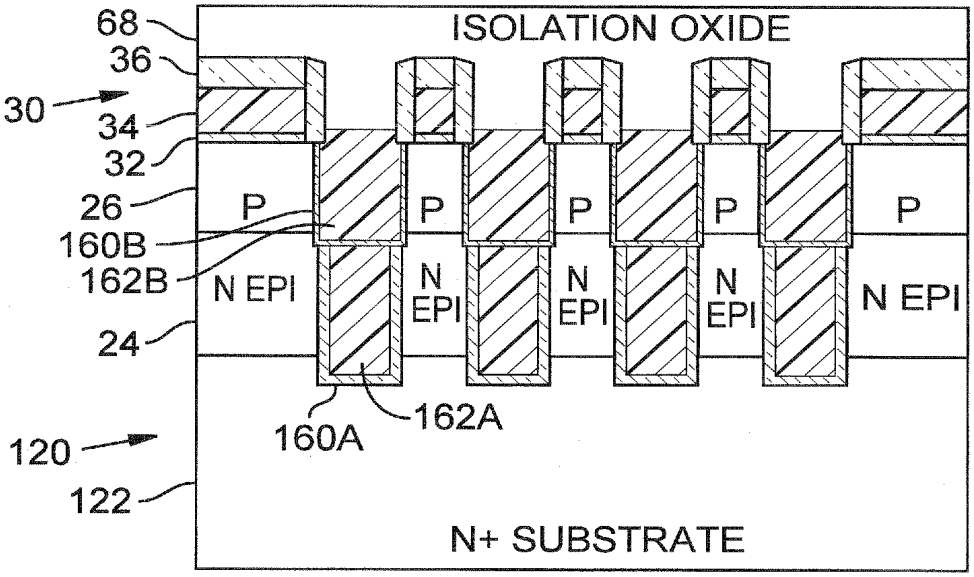

68
36
30
34
32
26
160B
162B
24
120
122
ISOLATION OXIDE
P
N EPI
160A
162A
N+ SUBSTRATE

FIG. 19

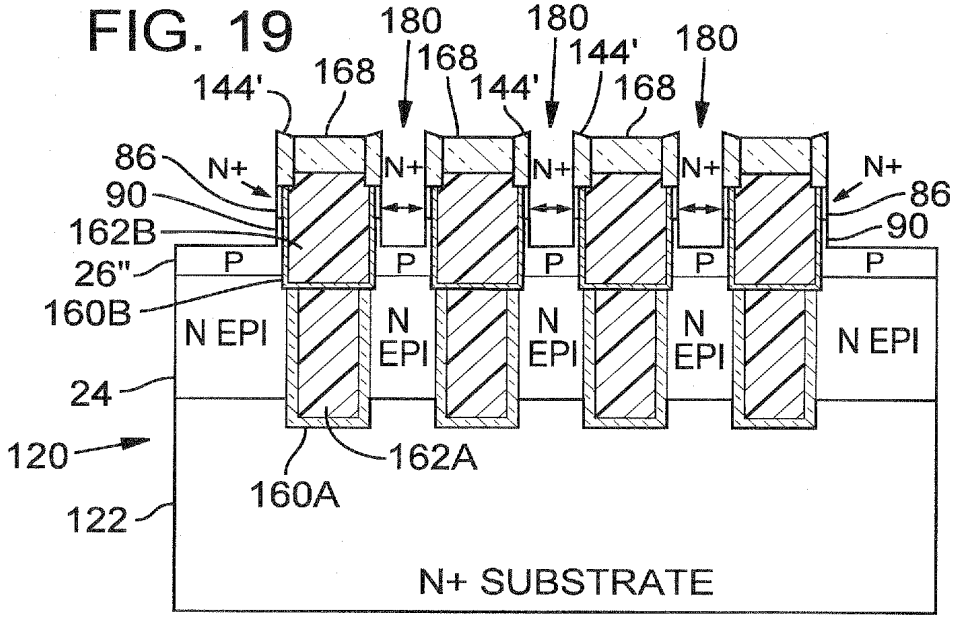

180
168
144'
86
90
162B
26"
160B
24
120
122
N+
P
N EPI
160A
162A
N+ SUBSTRATE

FIG. 20

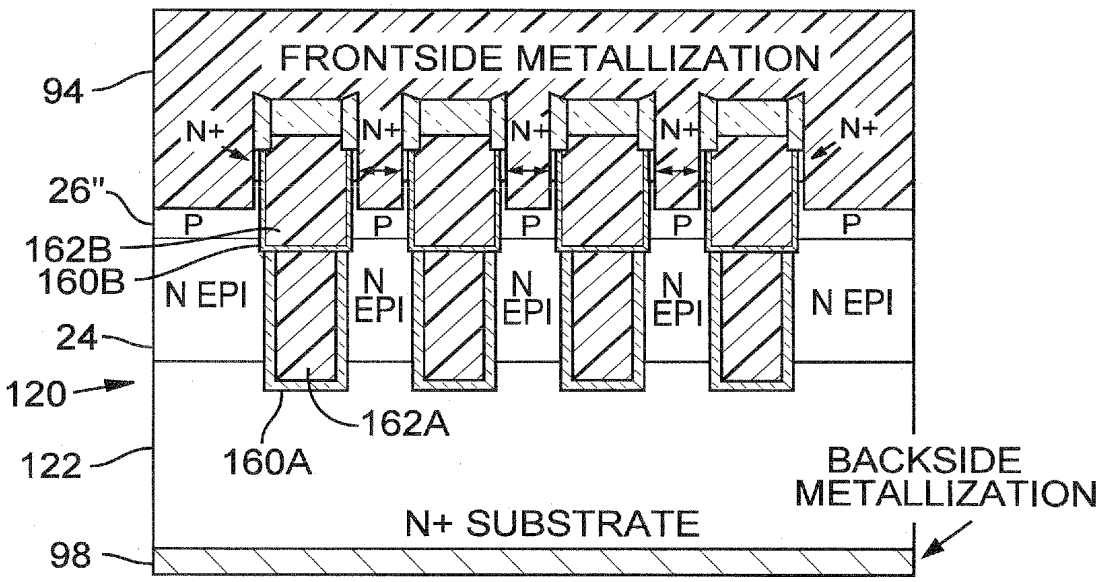

FRONTSIDE METALLIZATION
94
N+
N+
N+
N+
N+
26"
P
P
P
P
P
162B
160B
N EPI
N EPI
N EPI
N EPI
N EPI
24
120
162A
160A
122
BACKSIDE METALLIZATION
N+ SUBSTRATE
98

FIG. 21

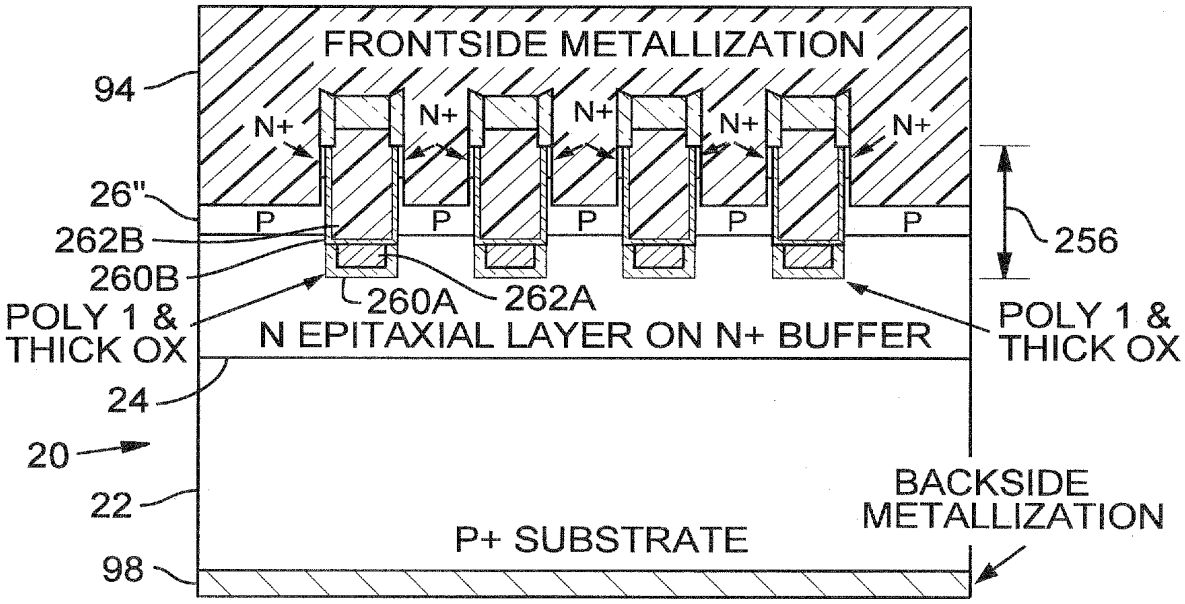

FRONTSIDE METALLIZATION
94
N+
N+
N+
N+
N+
26"
P
P
P
P
P
262B
260B
256
260A
262A
POLY 1 & THICK OX
N EPITAXIAL LAYER ON N+ BUFFER
POLY 1 & THICK OX
24
20
22
BACKSIDE METALLIZATION
P+ SUBSTRATE
98

FIG. 22

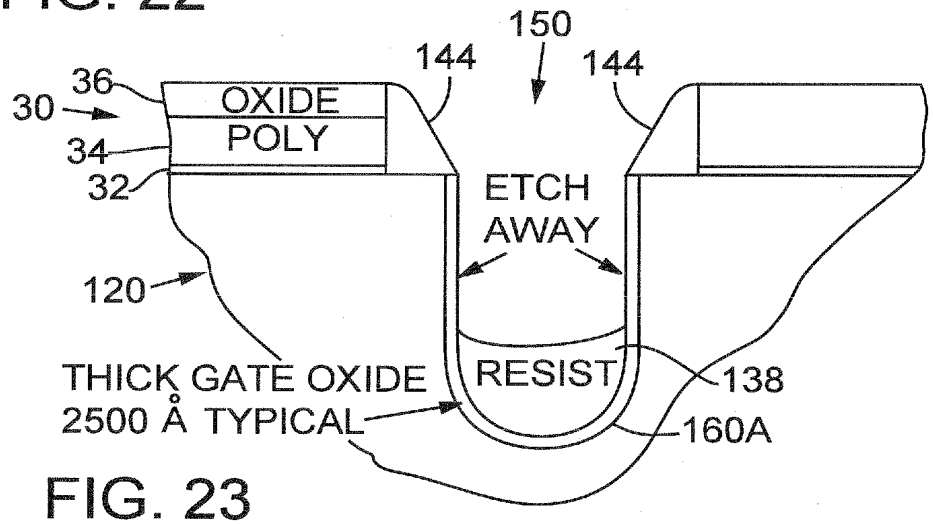


FIG. 23

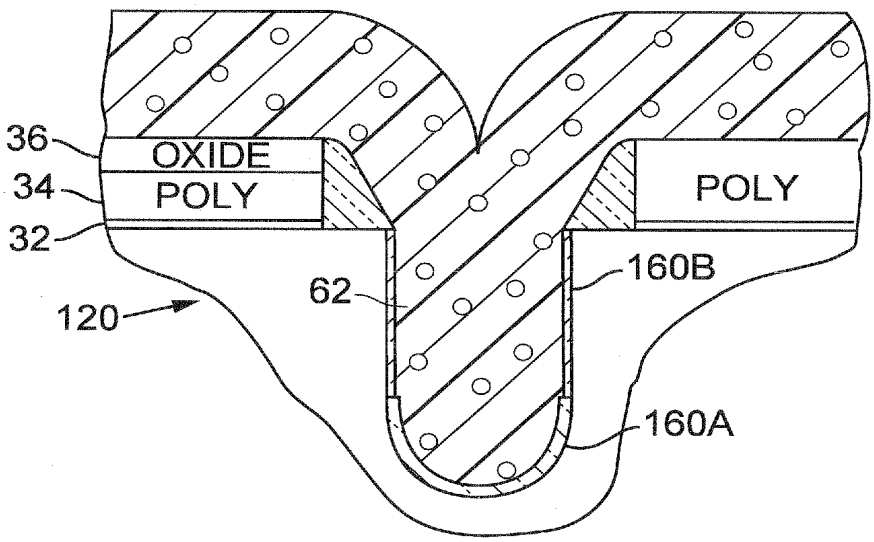


FIG. 24

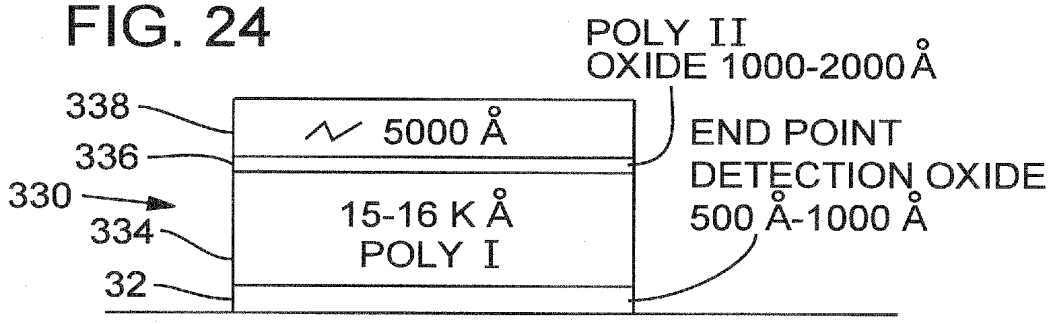
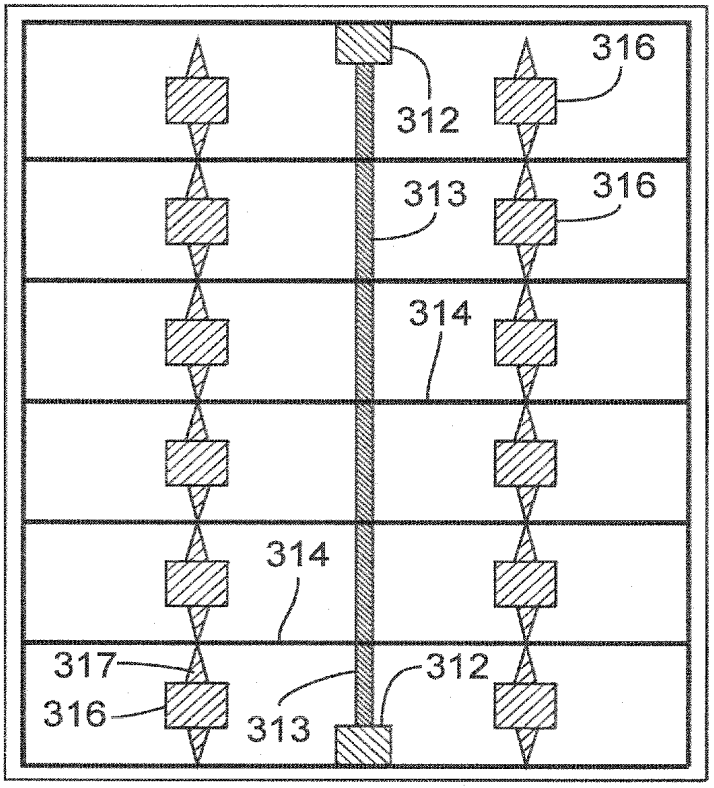


FIG. 25



60 X 25 MIL SOURCE PAD

25 X 35 MIL GATE PAD

MAIN GATE BUS 4MIL WIDE

SECONDARY GATE BUS 2MIL WIDE